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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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GROUP 3700

Application Number: 10/678,841
Filing Date: October 03, 2003
Appellant(s): CLEARY ET AL.

James D. Christoff
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 29,2006 appealing from the Office action mailed July 5, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

3,949,477	Cohen et al.	4-1976
5,316,473	Hare	5-1994

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 43-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al. in view of Hare. Cohen et al. disclose a method of bonding orthodontic appliances to a patient's teeth comprising providing orthodontic appliances 14 for at least two teeth 20; providing a quantity of photocurable material for each appliance (column 3 line 23); placing each orthodontic appliance on a corresponding tooth such that the material is between the appliance and the tooth (column 3 lines 25, 35); providing a substrate and an array of light emitters 16 mounted on the substrate 15; placing the substrate and light emitters in the oral cavity adjacent the orthodontic appliances (column 2 line 37, column 3 line 37) such that the light emitters lie along a path that is located in an occlusal direction from the outer tips of the patient's teeth, interpreted as shown by Cohen et al. because the claimed language is not directed to the location of the light emitters but referred to broadly in terms of the oral anatomy (teeth) of the patient and even so not specific as to which tooth or teeth of a full dentition of the patient the direction is to be taken and from which outer tips; and activating the light emitters in order to direct light in a gingival direction across the surfaces of the teeth, again interpreted as shown by Cohen et al. because the claimed language is not directed to the location of the light emitters but the resulting light is referred to broadly in terms of the surfaces of the teeth of the patient and not specific as to which surfaces of the tooth or teeth of a full dentition of the patient, and toward the photocurable material (column 3 line 38); however, Cohen et al. show light emitters of conductors and not solid state light emitters. Hare teaches a method of transmitting light in the oral cavity to cure dental material and the step of providing a substrate 10a and an array of solid state light emitters 15 (column 4 line 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify (replace) the light emitters of Cohen et al. with the solid state light emitters as in Hare (figure 2) in order to provide uniform emission and distribution of light to the intended area in view of Hare (column 2 line 18), and in turn lead to a more efficient process such as eliminating the need to maintain the substrate in the oral cavity over a long period of time. Cohen et al. show a substrate that comprises an indirect bonding placement device (Abstract line 2). The device comprises a shell having an overall, generally U-shaped configuration in plan view (column 4 line 5). The device has a channel that corresponds to the shape of at least a portion of the arch (column 2 line 27) and the array is located adjacent the channel (column 2 line 36). The array extends along a longitudinal axis of the channel (figure 4). The light is directed through light-transmissive matrix material (column 3 line 66). The substrate is held by clamping the substrate between the upper and lower teeth of the patient (column 3 line 29). The substrate is generally flat. Substrates of a full dental arch as well as the size of approximately the length of a quadrant arch are well known in the art and Hare teaches a quadrant apparatus constructed in the same manner as a full arch (column 6 line 3).

(10) Response to Argument

Appellant submits that the claimed invention is neither taught nor suggested by the combination of the references; however, argues that the primary reference of Cohen et al. alone does not disclose the use of solid state light emitters in pages 4 and 5. It is noted that the lack of showing of light emitters of solid state device in Cohen et al. has been acknowledged; therefore, a rejection of obviousness was made with the secondary reference of Hare, which shows the array of solid state light emitters.

In response to Appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Appellant argues that the Hare reference is directed to dental apparatus for light curing of dental impression material, and one would not turn to the Hare patent to attempt to improve methods of bonding orthodontic appliances to teeth and combine the two references. Both dental impression material and adhesive material to bond orthodontic appliances of Hare and Cohen et al., respectively, require curing with illumination of the oral cavity and one of ordinary skill in the art would recognize that the same methods could be used. In fact Hare states "those skilled in the art will recognize that the same procedures can be used for curing dental materials used to reline dentures or *materials associated with orthodontic appliances* and other dental materials known to those skilled in the art" (column 9 line 20).

In response to Appellant's argument the Hare reference is nonanalogous art, it has been held that a prior art reference must either be in the field of Appellant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The Hare reference is used to show the use of solid state light emitters (light emitting diodes) in a device used to direct light in the oral cavity. The method steps of Cohen et al. are used to show bonding of orthodontic appliances to teeth, what is lacking in Cohen et al. is the use of solid state light emitters. Hare and Cohen et al. are analogous art because they are from the similar problem solving area of providing light in the oral cavity with an apparatus of a substrate and light emitters.

In response to Appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The fact that the Hare reference discloses alternative uses of the procedure and apparatus (column 9 line 18) shows that the examiner took into account knowledge within the level of ordinary skill in the art in applying the secondary reference and did not arrive at the conclusion of obviousness based on knowledge gleaned only from Appellant's disclosure.

Accordingly, the examiner respectfully disagrees with Appellant's assessment that there is no suggestion or motivation in the cited references or in the prior art as a whole for making the combination.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Melba Bumgarner Melba Bumgarner

Conferees:

Cris Rodriguez Cris Rodriguez

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